

# CURRICULUM VITAE

RAINER K. L. TRUMMER

## PERSONAL

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Year of Birth 1968  
Citizenship Austria



## DIPLOMAS

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June 2005 Dipl.-Ing. (M.S.) Degree in Applied Computer Sciences  
Department of Scientific Computing, University of Salzburg

May 1991 Master Craftsman's Diploma in Electromechanical Engineering  
Kammer der Gewerblichen Wirtschaft für Salzburg

July 1990 Foreman's Diploma in Industrial Electronics  
Wirtschaftsförderungsinstitut der Handelskammer Salzburg

## RESEARCH INTERESTS

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- Development of control and navigation systems for UAVs (unmanned aerial vehicles)
- Development of operating systems, especially real-time and FPGA-based hybrid concepts
- Design and implementation of algorithms for parallel and multi-word computation

## SKILLS/EXPERIENCE

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- Design and realization of the JAviator (Java Aviator) high-payload quadrotor helicopter
- FPGA-based hardware development in Verilog HDL with the Xilinx ISE environment
- Design and implementation of application-specific high-speed algorithms in different areas
- Development of C++ algorithms and abstract data types for multi-word computation
- Several years of practice in the field of electrical and mechanical engineering

## PUBLICATIONS

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1. J. Auerbach, D.F. Bacon, D.T. Iercan, C.M. Kirsch, V.T. Rajan, H. Röck, and R. Trummer. Low-Latency Time-portable Real-time Programming with Exotasks. *ACM Transactions on Embedded Computing Systems (TECS)*, 8(2):1–48, January 2009.

2. S.S. Craciunas, C.M. Kirsch, H. Röck, and R. Trummer. The JAviator: A High-Payload Quadrotor UAV with High-Level Programming Capabilities. In *Proceedings of the AIAA Guidance, Navigation, and Control Conference (GNC)*. Honolulu, Hawaii, August 2008.
3. J. Auerbach, D.F. Bacon, D.T. Iercan, C.M. Kirsch, V.T. Rajan, H. Röck, and R. Trummer. Java Takes Flight: Time-portable Real-time Programming with Exotasks. In *Proceedings of the ACM SIGPLAN/SIGBED Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES)*. ACM Press, 2007.
4. R. Trummer. A High-Performance Data-Dependent Hardware Integer Divider. Master's Thesis, Department of Scientific Computing, University of Salzburg, Austria. June 2005.
5. R. Trummer, P. Zinterhof, and R. Trobec. A High-Performance Data-Dependent Hardware Integer Divider. In *Parallel Numerics '05—Theory and Applications*, University of Salzburg, Austria and Jožef Stefan Institute, Ljubljana, Slovenia. April 2005.

## PATENTS

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1. Rainer Trummer and Roman Trobec. *High-Speed Continually-Aligning Divider*. Patent Application No. 200600010, Slovenian Intellectual Property Office, Ljubljana, Slovenia. January 2006.

## SESSION CHAIR

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Session Chair, AIAA Guidance, Navigation, and Control Conference (GNC), 2008 (E. Johnson, Georgia Institute of Technology, Session Chair).

## CONFERENCE REFEREE

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2010	International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)
2009, 2008	Workshop on Adaptive and Reconfigurable Embedded Systems (APRES)
2009, 2008	Design, Automation, and Test in Europe Conference (DATE)
2009, 2008	International Conference on Embedded Software (EMSOFT)
2009	International Conference on Computer-Aided Design (ICCAD)
2009	Real-Time Systems Symposium (RTSS)
2008, 2006, 2005	ACM SIGPLAN/SIGBED Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES)
2008	AIAA Guidance, Navigation, and Control Conference (GNC)
2007, 2006	European Systems Conference (EuroSys)
2006	Euromicro Conference on Real-Time Systems (ECRTS)
2006	International Conference on Software and Data Technologies (ICSOFT)
2006	Joint Modular Languages Conference (JMLC)
2006	IEEE Real-Time & Embedded Technology & Applications Symposium (RTAS)

## EDUCATION

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07/2003—06/2005	UNIVERSITY OF SALZBURG Dept. of Computer Sciences (Master's Degree)	Salzburg
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08/2002—06/2003	DUKE UNIVERSITY Dept. of Computer Sciences (Exchange Year)	Durham, NC, USA
10/1998—07/2002	UNIVERSITY OF SALZBURG Dept. of Computer Sciences (Bachelor Degree)	Salzburg
09/1988—07/1990	WERKMEISTERSCHULE WIFI Vocational College of Industrial Electronics	Salzburg
09/1983—07/1987	LANDESBERUFSSCHULE IV School of Electrical and Mechanical Engineering	Salzburg

## EMPLOYMENT

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10/2005—Present	UNIVERSITY OF SALZBURG Ph.D. Student at the Dept. of Computer Sciences	Salzburg
07/2003—09/2005	JUWELIER R&A FALKENSTEINER Technical Assistant (part-time): all technical belongings	Salzburg
08/2002—06/2003	DUKE UNIVERSITY Exchange Year: Graduate School of Computer Science	Durham, NC, USA
10/1994—07/2002	TIROLER FRANZISKANERPROVINZ Software Developer: implementation of accounting software	Salzburg
07/1993—09/1994	KH DER BARMHERZIGEN BRÜDER Technical Director: person in charge for technical equipment	Salzburg
10/1992—05/1993	LASERTECHNIK GMBH (bankruptcy 07/1993) Electronic Technician: service and repair of high-power lasers	Eugendorf
05/1989—09/1992	SANITAS MEDIZINTECHNIK GMBH Medical Technician: service and repair of medical equipment	Wals
12/1987—04/1989	HALE ELECTRONIC GMBH Electronic Technician: production and repair of electronics	Salzburg
04/1987—11/1987	SCHWARZENBERGKASERNE Compulsory Military Service: Dept. of Radar Transmission	Siezenheim
08/1983—05/1987	HALE ELECTRONIC GMBH Apprenticeship: installation and service of car-electronics	Salzburg

## REFERENCES

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- Christoph M. Kirsch, Professor, University of Salzburg, Austria, ck@cs.uni-salzburg.at
- Peter Zinterhof, Professor, University of Salzburg, Austria, peter.zinterhof@sbg.ac.at
- Roman Trobec, Ass. Professor, Jožef Stefan Institute, Ljubljana, Slovenia, roman.trobec@ijs.si